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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/749,424

12/31/2003

Wenguang Li

066243-0237 (141211)

9576

33679

7590

05/29/2008

GE MEDICAL SYSTEM
C/O FOLEY & LARDNER LLP
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EXAMINER

WEATHERBY, ELLSWORTH

ART UNIT

PAPER NUMBER

3768

MAIL DATE

DELIVERY MODE

05/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/749,424	Applicant(s) LI ET AL.	
	Examiner ELLSWORTH WEATHERBY	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,7,10,12,13,16 and 25-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,7,10, 12-13, 16, and 25-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/28/2008 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 7, 10, 12-13, 16 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Packer et al. (USPN 6,556,695).

4. Packer et al. '685 teaches locating the position a series of points along a first boundary of an imaged anatomy, the series of points defined by a physical location of a probe inside a body and identifying a size and a shape of a first boundary (col. 10, ll. 22-35; col. 12, l. 36- col. 13, l. 30) and registering the first size and shape of the first boundary defined by the series of points with a second boundary defined by an acquired image data of the imaged anatomy (col. 10, ll. 22-35; col. 12, l. 36- col. 13, l. 30); and

calculating if there is a match between the first boundary and the second boundary and displaying a graphic representation of the location of the probe at each of the series of points for display with the acquired image data of the image anatomy (abstract; col. 10, ll. 22-35; col. 12, l. 36- col. 13, l. 30). Packer et al. '685 goes on, teaching a plurality of electrodes (fig. 9) for producing real-time electrical maps of the heart in real time (col. 11, ll. 34-67). The locations of the electrodes (268) are registered with the images to produce dynamic 4D model of the electrical activation and subsequent contraction of the heart (col. 12, l. 36- col. 13, l. 30). That is, using assembly (261) the physician identifies and registers the position of each electrode (268) positioned on bars (262) in the diagnostic image thereby producing a dynamic activations map for each location on the heart wall surface (col. 12, ll. 7-62).

5. Claims 25-26 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Packer et al. (USPN 6,556,695) as applied to claims 1, 7, and 12 above, and further in view of Ben-Haim et al. (USPN 6,892,091).

6. Packer et al. '685 teaches all the limitations of the claimed invention including producing dynamic 4D models of the electrical activation and subsequent contraction of the heart (col. 12, l. 36- col. 13, l. 30). However, Packer et al. '685 does not expressly teach comparing a size and shape of a boundary of a second feature defined by additional series of points located with the probe.

7. In the same field of endeavor, Ben-Haim et al. teaches tracking the location of a catheter distal within the heart to infer cardiac motion trajectories (abstract; col. 1, ll. 54-58).

8. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Packer et al. '685 in view of Ben-Haim et al. '091. The motivation to modify Packer et al. '685 in view of Ben-Haim et al. '091 would have been to improve or validate the diagnostic data by tracking the the motion of the probe throughout the cardiac cycle, as taught by Ben-Haim et al. '091.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLSWORTH WEATHERBY whose telephone number is (571) 272-2248. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3737

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian L Casler/
Supervisory Patent Examiner, Art
Unit 3737

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